

EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment						Work Assignment Number 1-02				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-D-11-006			Contract Period 04/29/2011 To 03/28/2012 Base <input checked="" type="checkbox"/> Option Period Number			Title of Work Assignment/SF Site Name Soft Wood Testing				
Contractor EASTERN RESEARCH GROUP, INC.					Specify Section and paragraph of Contract SOW A & B					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval						Period of Performance From 06/30/2011 To 03/28/2012				
Comments: This work assignment includes 250 hours for the preparation of the work plan and to begin work on the work assignment.										
<input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO <input type="checkbox"/> (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code (Max 7)
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 0				
04/29/2011 To 03/28/2012										
This Action:						250				
Total:						250				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:		LOE:				
Cumulative Approved:				Cost/Fee:		LOE:				
Work Assignment Manager Name Mike Toney						Branch/Mail Code:				
_____ (Signature) (Date)						Phone Number 919-541-5247				
						FAX Number:				
Project Officer Name Reconstruct User						Branch/Mail Code:				
_____ (Signature) (Date)						Phone Number:				
						FAX Number:				
Other Agency Official Name						Branch/Mail Code:				
_____ (Signature) (Date)						Phone Number:				
						FAX Number:				
Contracting Official Name Rodney-Daryl Jones						Branch/Mail Code:				
_____ (Signature) (Date)						Phone Number: 919-541-3112				
						FAX Number:				

Statement of Work

Contract: ERG EP-D-11-006

WA: 1-02 Soft Wood Testing

WAM: Dennis Mikel

I. BACKGROUND

This work assignment is a continuation of MACTEC work assignment number 5-15 EPA contract number EP-D-05-096 titled, "Wood Burning Support for NSPS Revision." In the previous work assignment, a generic Quality Assurance Project Plan (QAPP) was developed for this project. This testing will be performed by an EPA-accredited laboratory as specified in 40 CFR Part 60, Subpart AAA, Standards of Performance for New Residential Wood Heaters, Section 60.535. Three EPA-accredited laboratories have been involved in the EPA voluntary programs for residential wood heaters: OMNI Test Labs, Portland, Oregon; Intertek Testing, Madison, Wisconsin; and Myren Consulting, Coleville, Washington. In the previous contract, MACTEC had already begun discussions with OMNI Test Labs about this testing.

This emission test is for softwood fuel for the New Residential Wood Heater New Source Performance Standard (NSPS). The contractor shall conduct emission testing using EPA Test Method 28 OWHH on a Central Boiler E-Classic 1400 (EPA Voluntary Program Phase 2 approved outdoor hydronic heater). The E-Classic 1400 to be tested will be obtained and delivered to the contractor's lab.

II. TASKS

The contractor shall conduct emission tests for fine particulate matter (PM_{2.5}) from Douglas Fir (softwood) species at the burn rate categories specified by the work assignment manager (WAM). The Douglas Fir shall be in the **crib and cord wood** configuration. The results of this testing will be used to help determine whether EPA Test Method 28 OWHH should include testing with softwood to build a basis for comparing emissions from hydronic heaters with wood stoves and other wood burning devices, which typically test with Douglas Fir for the current NSPS certification tests.

In addition to the soft wood testing above, the contractor shall conduct emission testing on the E-Classic 1400 using **red or white oak cord wood**. This data will be used to compare to the original qualifying data of the E-Classic 1400.

The contractor shall submit a **cost estimate** for completing the following test scenarios independently and collectively. The contractor shall provide a cost estimate for testing with Douglas Fir (crib wood) scenario A, and Douglas Fir (cord wood) scenario B, and Red or White Oak (cord) scenario C, and combined cost for testing all scenarios. Please note that there are only three test runs for scenario A. The contractor shall not begin work until the work plan has been approved. Example of cost estimate: cost for scenario A, cost for scenario B, cost for scenario C, cost for scenarios A+B+C.

Scenario A: 1 medium low burn rate (category 2) using Douglas Fir (crib wood)
1 medium high burn rate (category 3) using Douglas Fir (crib wood)
1 high burn rate (category 4) using Douglas Fir (crib wood)

Scenario B: 1 low burn rate (category 1) using Douglas Fir (cord wood)
1 medium low burn rate (category 2) using Douglas Fir (cord wood)
1 medium high burn rate (category 3) using Douglas Fir (cord wood)
1 high burn rate (category 4) using Douglas Fir (cord wood)

Scenario C: 1 low burn rate (category 1) using Red or White Oak (cord wood)
1 medium low burn rate (category 2) using Red or White Oak (cord wood)
1 medium high burn rate (category 3) using Red or White Oak (cord wood)
1 high burn rate (category 4) using Red or White Oak (cord wood)

For each test run the contractor shall measure CO, CO₂, and O₂ at ten minute intervals and analyze the resulting data for each test run. The contractor shall also measure the temperatures measured across the heat exchanger supply and load side should be recorded at one (1) minute intervals. The contractor shall use the latest version of Method 28 OWHH calculating efficiencies using load side of the heat exchanger.

Deliverables: The contractor shall submit preliminary data as they become available.
The contractor shall submit draft and final reports.

The contractor shall submit the draft report three (3) months from the effective date of this work assignment.

The final report is due two (2) weeks after receiving comments from the WAM.
The contractor shall submit two (2) hard copies and two (2) electronic disc copies of the final report.

EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment						Work Assignment Number 1-02				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000001				
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Contractor EASTERN RESEARCH GROUP, INC.					Specify Section and paragraph of Contract SOW					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval						Period of Performance From 06/30/2011 To 03/28/2012				
Comments: The work plan dated 08/16/11 has been reviewed and we concur with the labor mix, technical hours (578), ODCs, total estimated cost \$105,356 and completion date of March 31. 2012. ERG shall complete all test scenarios as stated in the WP. This document is IAW the CMM 7.3.5.1 (D)										
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1										
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Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 250				
04/29/2011 To 03/28/2012										
This Action:						328				
Total:						578				
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee:		LOE:				
Cumulative Approved:				Cost/Fee:		LOE:				
Work Assignment Manager Name Mike Toney <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number 919-541-5247 FAX Number:				
Project Officer Name Margaret Dougherty <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 919-541-2344 FAX Number:				
Other Agency Official Name <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: FAX Number:				
Contracting Official Name Rodney-Daryl Jones <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 919-541-3112 FAX Number:				